

CLAIMS

1. A rotary machine capable of generating a flux of fluid,
characterised in that it comprises a rotor (6) bearing a fitting (9) in the
5 form of a crown at least partly made in a flexible material, permeable to
fluids, means for driving the rotor (6) into rotation at a variable velocity,
and means allowing for carrying out a deformation of the fitting (9) in
response to the variation of the rotating speed of the rotor (6).
- 10 2. Machine according to claim 1,
characterised in that the means for carrying out the aforesaid
deformation involve a transmission device between the rotor (6) and one
of the cylindrical faces of the fitting (9), so that a change in the velocity
of the rotor (6) generates a compression or a expansion of the fitting (9)
15 which is retained by the transmission means, and that, under the effect
the centrifugal force .
3. The machine according to claim 2,
characterized in that the aforesaid fitting (9) has the form of a crown
20 contained in a cage (8).
4. The machine according to claim 2,
characterized in that the aforesaid fitting (9) has the form of a crown
encircling a cage (8).
25
5. The machine according to claim 2,
characterized in that the aforesaid fitting comprises two crowns (9a and
9b), respectively contained in the aforesaid cage (8) and encircling the
aforesaid cage (8).
30
6. The machine according to claim 1,

characterised in that the means for carrying out the aforesaid deformation involve a transmission device connecting the rotor to one of the two radial faces of the fitting, as well as an annular part permanently
5 attached to the other radial face of the fitting, so that due to the inertia of this annular part, a change in the rotational velocity of the rotor generates a process of torsion and compression of the fitting (compression due to bringing both radial faces of the fitting together).

10 7. The machine according to claim 1,
characterized in that the aforesaid annular part is rotatably mounted with the possibility of axial displacement on the axis (28) for driving the rotor, by means of a bearing (35).

15 8. The machine according to claim 7,
characterized in that the axis (28) comprises a helical groove or threading cooperating with a finger or internal screw thread provided in the bearing (35).

20 9. The machine according to claim 7,
characterized in that it comprises means for subjecting the annular part (34) to vibrations.

10. The machine according to claim 7,
25 characterized in that it comprises means for braking the annular part (34).

11. The machine according to to any of the preceding claims,
characterized in that the aforesaid fitting (9) is made in a flexible,
30 reticular and/or cellular material with open cells.

12. The machine according to any of the preceding claims, characterized in that the aforesaid fitting (9) is made in a flexible fibrous or microfibrinous material of natural origin and/or a metal and/or synthetic and/or antiseptic material.

5

13. The machine for extracting impurities contained in a gas according to any of the preceding claims, characterized in that the aforesaid fitting (9) is made in an adsorbing material and in that it further comprises a device (11) for spraying a
10 liquid into the air flux sucked up by the fitting (9) on the one hand and means (13) for collecting the liquid adsorbed by said fitting (9) and ejected under the effect of the centrifugal force on the other hand.

14. The machine according to claim 13,
15 characterized in that the aforesaid fitting rotates between two parallel flanges (2, 3) and in that the lower flange (3) is provided with a basin (13) into which at least one fluid discharge port (14) opens.

15. The machine according to any of claims 13 and 14,
20 characterized in that the aforesaid transverse wall (4) is provided with flutes directed downwards or relief features optionally helical or oblique used for channeling the liquid in a desired direction.

16. The machine according to any of the preceding claims,
25 characterized in that a spring (RE) is interposed between both radial faces of the fitting (9).

17. The machine according to any of the preceding claims, characterized in that the aforesaid fitting has a composite structure
30 comprising two portions more or less permeable or impermeable to the displaced or propelled fluid, so as to direct the fluid into the mass or to

increase the collection and/or aeraulic efficiency of the reticular mass or to discharge condensates, liquids or bubbles (in the liquid phase).

18. The machine according to any of the preceding claims,
5 characterized in that the aforesaid fitting comprises superimposed and/or concentric layers of different materials.